W radians/sec.

Ball Mass = 2.2 kgs.

Angle = 30 degrees

b

T

The .2 kg ball ( ball is sliding not rotating)and the supporting cord are revolving about the vertical axis on the fixed smooth conical surface with an angular velocity of W = 4 radians/sec. The green ball is held in position b = .3 m by the tension T in the yellow cord.

If b is reduced to the constant value of .2 m by increasing T in the cord compute the new angular velocity W and the work U, done on the system by T.

Ans> W = 9 rads/sec U = .233 J